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Title: Advancing representations of turbulence in Earth System Models

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Advancing representations of turbulence in Earth System Models

(w19_coastalles)

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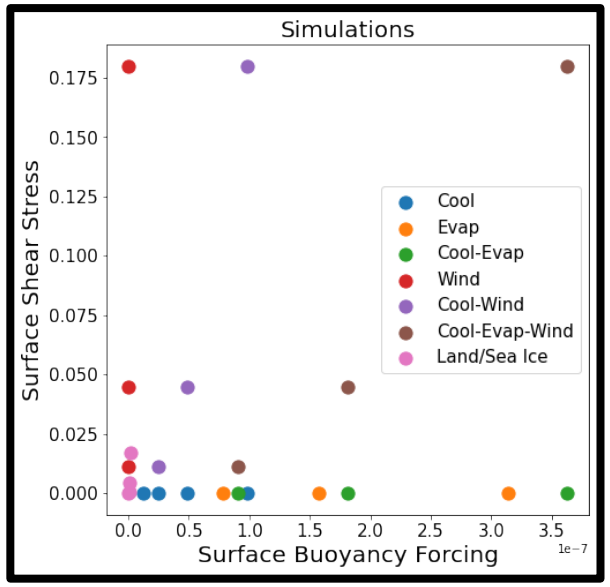
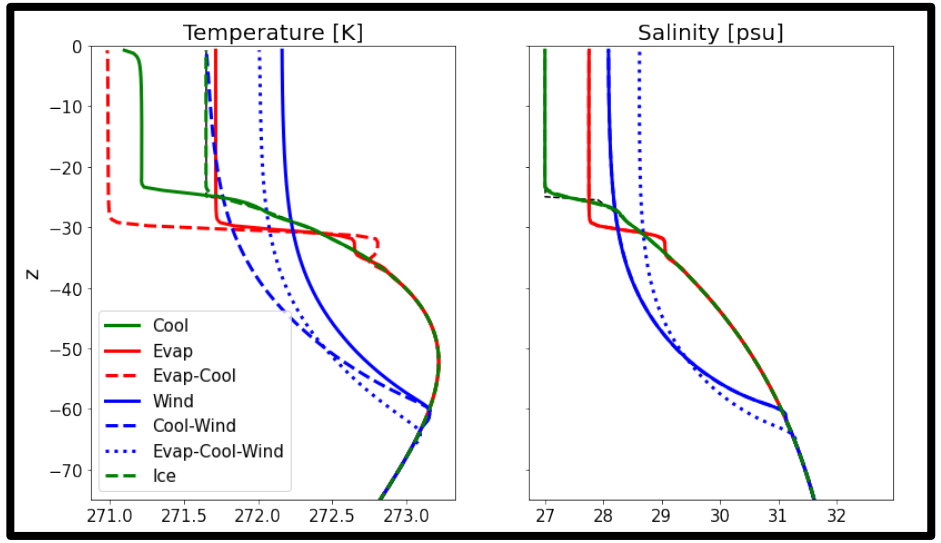


- We have conducted a first of its kind set of large eddy simulation (LES) experiments of Arctic relevant conditions based on observations (upper left panel)
- Without ice wind rapidly erodes buffer from deeper ocean heat further amplifying sea ice loss (lower left panel)
- Structures of turbulence are different from mid-latitude tests (lower right)
- These simulations will advance our knowledge of Arctic mixing and provide a unique validation test set for models of oceanic turbulent mixing



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